# Drilling starts at Fraser Range South nickel-copper project in WA

## Highlights

- **A 1500m Reverse Circulation drilling program started at Ram's Fraser Range South nickel-copper project in WA**

- **Drilling will test two priority conductors located just 2km from Sirius' Crux anomaly**

- **Ram's targets have been outlined by extensive electro-magnetic surveys and soil sampling**

- **In total 8-12 holes will be drilled to depths of up to 250m down-hole**

- **Two to four holes will be drilled at conductor FRSV_1 and FRSV_3 and approximately six holes will be drilled to test an extensive soil anomaly immediately south of the conductors**

Ram Resources Limited (ASX: RMR) (**Ram**) is pleased to advise that the maiden drilling program at its Fraser Range South project in WA is due to commence, with the drill rig is onsite at Southern Hill Station.

The 1500m RC drill program is design to test ground EM conductors FRSV_1 and FRSV_3, located at the southern end of the Fraser Range gravity high, at down-hole depths of between 100m-250m (See Figure 1).

The drilling program, which is being conducted by SBD Drilling, will also target a highly prospective soil anomaly within the project area.
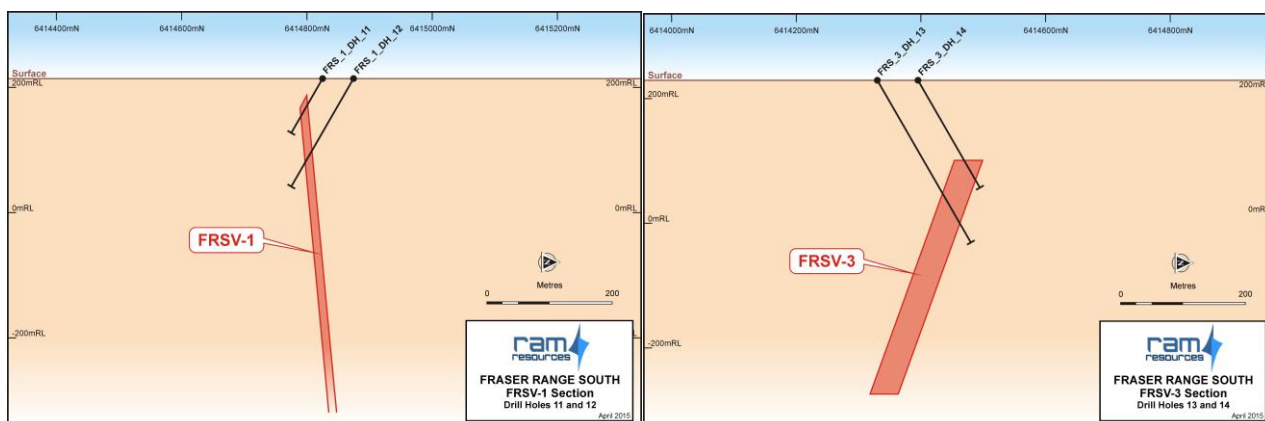


**Figure 1 Fraser Range South Drill Holes Bed Rock EM Conductor FRSV_1 and FRSV_3**

Ram's two priority target bed rock conductors, FRSV_1 and 3 (Figures 1 and 2), are to be tested with two to four RC holes for a total of 800m. The deep holes will be cased to enable down-hole EM to be undertaken.

Ram also intends to drill six to eight holes ranging from 50m to 100m deep across the soil anomaly, immediately south of the priority targets, for a total of 700m. The soil anomaly is thought to be structural leakage from interpreted thrust faults associated with conductors FRSV_1 and 3. The drill program has been designed to help clarify the geology and determine the relationship between the soil anomaly and the conductors.
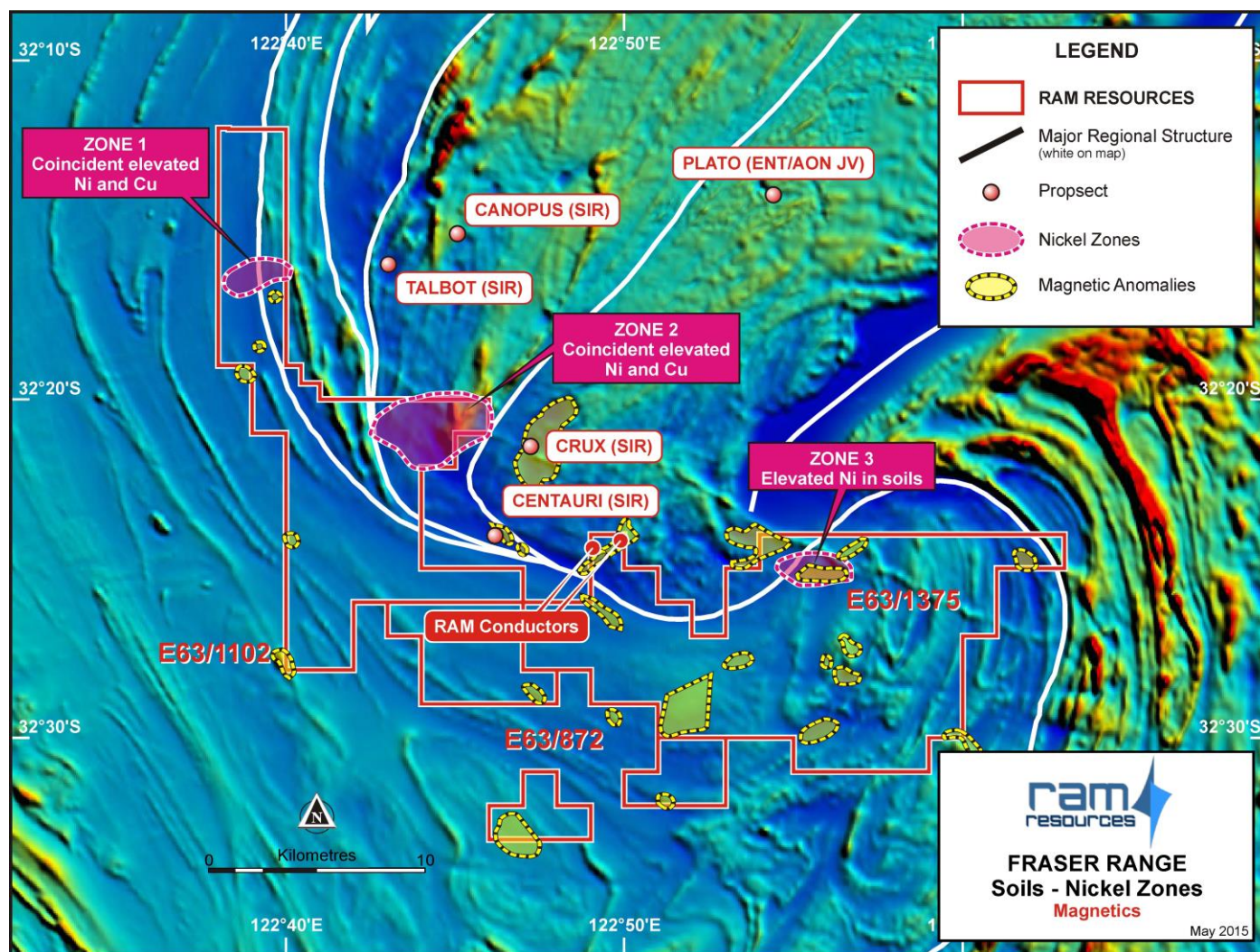


**Figure 2 Area of Exploration Interest**

In addition to the soil anomaly being tested in the current drilling program, Ram has recently identified three new soil anomalies, which are within 2-6km of Sirius Resources' Crux, Centauri and Talbot nickel prospects. The new soil anomalies cover three zones of elevated nickel and copper geochemistry (refer ASX announcement dated 25 May 2015), covering a total of 25km[2] (see Figure 2) and include peak nickel values of 103 ppm Ni and peak copper values of 96 ppm Cu.

In addition to the current drilling program, Ram is planning approximately 20 line km of ground EM across the three new soil anomalies (Figure 2) in the current quarter.  Any bed rock conductors identified from this EM program will be prioritised as potential targets for follow up drilling.

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**Forward Looking Statements**

The announcement contains certain statements, which may constitute "forward –looking statements". Such statements are only predictions and are subject to inherent risks and uncertainties, which could cause actual values, results, performance achievements to differ materially from those expressed, implied or projected in any forward-looking statements.

Any discussion in relation to the potential quantity and grade of Exploration Targets is only conceptual in nature. There has been insufficient exploration to estimate a Mineral Resource and that it is uncertain if further exploration will result in the estimation of a Mineral Resource.

*Competent Person Statements*

*The information in this report that relates to Exploration Results is based on information compiled by Mr Charles Guy a director of the Company, and fairly represents this information. Mr Guy is a Member of The Australian Institute of Geoscientists. Mr Guy  has sufficient experience which is relevant to style of mineralisation and type of deposit under consideration and to the activity being undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Charles Guy consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.*

*Mr Guy, a director, currently holds securities in the Company.*

*Attachment 1 Fraser Range South – JORC Tables*

## JORC Code, 2012 Edition – Table 1 report Fraser Range Project

## Section 1 Sampling Techniques and Data

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| **Sampling techniques** | *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* | *A total of 1076 soils samples were collected on 400m x 400m spacing.*<br><br>*948 Soils samples were collected at a depth of 30cm using a paleo-pick and sieved through a #80 (175µm) standard sieve.*<br><br>*128 Soils samples were collected at various depths using an auger and sieved through a #80 (175µm) standard sieve. Samples were collected from the auger maximum depth of penetration to a maximum of 1.2m.*<br><br>*Samples were stored and transported in geochemistry bags.*<br><br>*Samples have been analysed using an Olympus Delta Premium portable XRF Analyser. The XRF analyser was set up on "soils 3 beams" mode which was deemed the most appropriate mode to detect accurately low levels of Nickel and Copper in soils samples.* |
| | *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* | *Soils samples were located using a handheld GPS unit with a typical accuracy of 5m in this region.*<br><br>*XRF analyser calibration has been checked using the analyser's self-test every day.*<br><br>*XRF analyser calibration and accuracy has been checked at regular intervals measuring standards of known composition.*<br><br>*Time of irradiation and collection channel used for measurements were appropriate for Nickel and copper abundance evaluation. This set up was not appropriate for measurement of a wide range of elements including cobalt.* |
| | *Aspects of the determination of mineralisation that are Material to the Public Report.*<br>*In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.* | *948 Samples were collected digging a hole with a hand held pick to a depth of at least 30cm.*<br><br>*128 Samples were collected digging a hole with an auger to a depth varying between 20cm and 120cm.*<br><br>*Samples were then sieved and a minimum of 200 grams of the fraction finer than 180µm was then collected and stored into a paper geochemistry bag.*<br><br>*A pressed pellet of the sample was made using a PVC piston-ring-cup assembly and a vice. The pressed pellet was then placed in a stand coupled to a portable XRF analyser. The stand is connected to a computer for data acquisition. The stand is manufactured by the XRF analyser manufacturer.*<br><br>*This protocol is deemed appropriate to obtain semi-qualitative information.* |

| Drilling techniques | Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc). | 948 Samples collected using sample pick 128 Samples collected using a portable auger |
|---|---|---|
| Drill sample recovery | Method of recording and assessing core and chip sample recoveries and results assessed. | No drilling involved in this release. |
| | Measures taken to maximise sample recovery and ensure representative nature of the samples. | Soil samples- sieved on site. 200g collected |
| | Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material. | Soil sample -100% recovery |
| Logging | Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. | Soils samples depth and colour were recorded with the sample location. |
| | The total length and percentage of the relevant intersections logged. | No drilling involved in this release |
| | | |
| Sub-sampling techniques and sample preparation | If core, whether cut or sawn and whether quarter, half or all core taken. | No drilling involved in this release |
| | If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. | No drilling involved in this release |
| | For all sample types, the nature, quality and appropriateness of the sample preparation technique | To produce an accurate XRF analysis, samples were prepared into pressed pellets. The 180μm sieving produced a sample with sufficient homogeneity to reduce grain size and matrix effects on the XRF reading. Pressed pellets were made using a 40g to 50g fraction of the sample. This fraction was poured into a PVC ring placed onto a flat bottom PVC cup. A PVC piston was then introduced into the ring and the whole assembly was placed into a vice. The piston was pushed into the ring with the vice until the samples was compacted into a pellet. The pellet was then placed onto the XRF analyser. After analysis, the pellet was broken by hand and the sample returned back into the geochemistry bag. |
| | Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. | No sub-samples collected |
| | Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling. | No field duplicates have been taken. |
| | Whether sample sizes are appropriate to the grain size of the material being sampled. | 180μm mesh size was deemed appropriate to sample a representative fraction of the residual soil. |
| | | |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| *Quality of assay data and laboratory tests* | *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* | *XRF data is of qualitative nature.*<br><br>*All results included in this release are of qualitative nature only.* |
| | *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc* | *XRF analyser: Olympus Delta Premium*<br><br>*Factory calibrated.*<br><br>*Analysis total duration: 60s*<br><br>*Analysis on each collection channel (Main, Low, High, Light): 20s*<br><br>*No calibration factor applied.*<br><br>*-49 Measurements of Si blank*<br><br>*-30 calibration checks*<br><br>*-55 measurements of standards of known composition*<br><br>*did not show any noticeable variation in the analyser's accuracy.* |
| | *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.* | *Measurement of Si blank and standards was carried out to check accuracy of the XRF analyser.*<br><br>*41 field duplicates were collected as part of the program to check the validity of the sampling protocol.*<br><br>*-49 Measurements of Si blank*<br><br>*-30 calibration checks*<br><br>*-55 measurements of standards of known composition*<br><br>*All results included in this release are of qualitative nature only.* |
| *Verification of sampling and assaying* | *The verification of significant intersections by either independent or alternative company personnel.* | *Not applicable* |
| | *The use of twinned holes.* | *No drilling involved in this release* |
| | *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* | *Not applicable* |
| | *Discuss any adjustment to assay data.* | *No adjustments or calibrations were made to any data in this report* |
| *Location of data points* | *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* | *No drilling involved in this release* |
| | *Specification of the grid system used.* | *All soil samples were collected with reference to grid:*<br><br>*MGA_GDA94 ZONE 51* |
| | *Quality and adequacy of topographic control.* | *Assumed 5m with a handheld GPS device.* |
| *Data spacing and distribution* | *Data spacing for reporting of Exploration Results.* | *-All samples were collected on 400mx400m spacing.* |
| | *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* | *Mineralisation domains have not demonstrated continuity in either grade or geology. Therefore cannot support the definition of Mineral Resource and Reserve, and the classifications applied under 2012 JORC Code* |

| | *Whether sample compositing has been applied.* | *Sample compositing has not been applied* |
|---|---|---|
| ***Orientation of data in relation to geological structure*** | *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* | *Soils samples provide a surface sample only.* |
| | *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.* | *No mineralisation identified. No based sampling bias has been identified in this data at this point.* |
| ***Sample Security*** | *The measures taken to ensure sample security.* | *Samples were collected by DP Services NSW a specialised soils sampling contractor.*<br><br>*Samples have been stored securely and transported back to Perth by Toll Ipec.* |
| ***Audits or reviews*** | *The results of any audits or reviews of sampling techniques and data.* | *No review of data management system has been carried out.* |
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